Title (en)

Pre-metal deposition cleaning for bipolar semiconductors.

Title (de)

Reinigung vor der Metallabscheidung für bipolare Halbleiter.

Title (fr)

Nettoyage avant dépÔt de métal pour semi-conducteurs bipolaires.

Publication

EP 0275182 A2 19880720 (EN)

Application

EP 88300226 A 19880112

Priority

US 353287 A 19870113

Abstract (en)

A pre-metal deposition cleaning process for bipolar semiconductors includes a two step boron glass etching procedure: a chemical etchant consisting of DI, H2SO4, HNO3 and HCl (500:65:325:163) heated to 80 deg. C followed by a 10:1 (DI:HF) dip. The semiconductor wafer is then annealed in forming gas. Then the boron glass etching procedure is repeated. The initial etch removes any fluorine clustered under the boron skin, and the final etch removes any retained B-Si-O-F phase from the anneal step. The cleaning procedure produces bipolar semiconductors with low Vbe. The procedure can also be used for rework of high Vbe wafers without the anneal and the seocnd boron glass etch steps.

IPC 1-7

H01L 21/306

IPC 8 full level

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CPC (source: EP US)

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